1987-03-26

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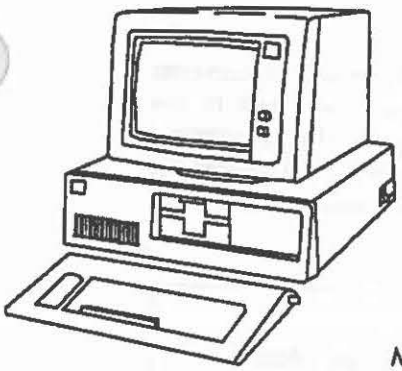
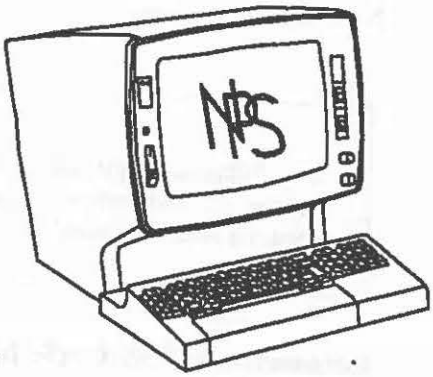
Monterey, California, Naval Postgraduate School



Computer Center BULLETIN



Naval Postgraduate School Monterey, California

March 26, 1987

ANNOUNCEMENTS

SPRING QUARTER TALKS

The User Services Group will give twenty-one talks at the beginning of this quarter to acquaint users with the various facilities of the VM/CMS timesharing and MVS batch systems available on the mainframe and with the services available in the Center's Microcomputing Lab. In addition, Prof. P. A. W. Lewis (OR) will present an introductory talk about the GRAFSTAT interactive statistical/graphics package.

The following eight talks will be given in the In-122 auditorium. Signup for these sessions is not required.

Introduction to VM/CMS: In-122

1410	Wednesday	1 April	June Favorite
1510	Thursday	2 April	Roger Hilleary
1410	Tuesday	7 April	June Favorite

This talk is given three times; it assumes no prior knowledge of the NPS computer. Topics to be covered include the use of the 3278 terminal, how to logon and logoff, use of the function keys, the HELP facility, and various general-purpose commands. It is strongly recommended for all new users of the Center and covers information which may not be provided in an introductory programming class. Be sure to bring a copy of Technical Note VM-01, *User's Guide to VM/CMS at NPS*. (A copy of this publication is usually provided when a new user registers in In-147.)

Introduction to XEDIT: In-122

1510	Wednesday	1 April	Patricia Collins
1510	Monday	6 April	June Favorite
1410	Wednesday	8 April	June Favorite

This talk is presented three times. It provides elementary information about the XEDIT full screen editor. The main emphasis is on methods for creating and changing programs and other files. Use of the PF keys and HELP facility in XEDIT are mentioned. The talk assumes little or no familiarity with XEDIT, but prior attendance at *Introduction to VM/CMS* is recommended.

Introduction to SIMPC: In-122

1410	Thursday	2 April	Donna Schoenecker
1510	Monday	13 April	Donna Schoenecker

This talk describes the SIMPC protocol converter which allows users of personal computers to use their equipment as terminals on the mainframe (327x emulation) and to transfer files between the IBM 3033AP system and their microcomputers. It will be given twice.

All other talks, which are described below, will be given in In-119, In-151 or In-260. Those interested in attending should sign up in the Consulting Office, In-146, to reserve a seat.

Introduction to Minitab: In-119

1510	Thursday	2 April	Dennis Mar

Minitab is an interactive statistical computing system available on VM/CMS. It is designed for moderate-size data sets which can be stored on a CMS A-disk. Minitab is quick and especially useful for exploring data, plotting, and regression analysis. Attendees should be familiar with the timesharing system.

Introduction to WordPerfect: In-151

1610	Thursday	2 April	Kathryn Strutynski
1610	Monday	6 April	Kathryn Strutynski

These are 110 minute hands-on sessions, both of which should be attended. WordPerfect is fast becoming the favorite word-processor of many companies and universities. These seminars will introduce you to most of its fundamental features. You will also be shown how to use some of its special features -- the spelling checker, the thesaurus, and outlines/tables/indices.

Introduction to GRAFSTAT: In-119

1410 Monday 6 April Prof. P.A.W. Lewis

This talk will give a brief introduction to GRAFSTAT, an APL package for interactive scientific-engineering plotting, graphics output development, applied statistics, and data analysis. The program features a full-screen interface, complete on-line help, color graphics capability and effectively combines computation and graphics. Complete routines for least squares fitting, fitting of probability distributions, design and implementation of quality control charts, regression and time series analysis are available.

Waterloo Script at NPS: In-119

1410 Wednesday 8 April Larry Frazier

Script is a text-formatting system developed at the University of Waterloo for use under CMS. A wide range of students and staff members use Script to prepare reports and theses. This talk will be most helpful to you if you have read the first section of Technical Note VM-06. Then try out Script at a terminal and come to the talk prepared to ask questions.

Introduction to SPSS-X: In-119

1510 Thursday 9 April Dennis Mar

SPSS-X, the Statistical Package for the Social Sciences, is a comprehensive tool for managing, analyzing, and displaying information. The speaker will describe the required data formats and SPSS-X control statements for a simple problem. Both batch and timesharing modes of execution will be demonstrated. This talk is intended for new users of SPSS-X.

Introduction to SAS: In-119

1410 Monday 13 April Dennis Mar

SAS, the Statistical Analysis System, is a flexible program for handling all phases of data analysis: retrieval, data management, statistical analysis, and report writing. It has excellent features for merging and subsetting data sets. The speaker will describe the required data format and SAS control statements for a simple problem. Both the batch and timesharing modes of execution will be demonstrated.

Introduction to GML: In-119

1410 Wednesday 15 April Larry Frazier

Generalized Markup Language (GML) provides a set of commands that simplifies the task of using the Script word formatter to prepare papers and other research publications. It takes care of references and footnotes and will also generate a Table of Contents for your paper. GML provides the same type of functions as SYSPUB, but GML commands are easier to use. Prior attendance at the *Waterloo Script at NPS* session, and reading the first section of Technical Note VM-06 will make the talk more useful.

Introduction to DISSPLA: In-260

1510 Wednesday 15 April Patricia Collins

DISSPLA is a device-independent graphics package for use by FORTRAN programmers. It allows convenient generation of a large variety of graphs, charts, text, etc. It may be used at NPS both on MVS (batch) and CMS (timesharing). This talk provides a general introduction and some examples of usage.

Introduction to Thesis9: In-119

1510 Thursday 16 April Larry Frazier

Thesis9 is an addition to the Script text-formatting system that simplifies production of a thesis meeting NPS standards. The talk will be useful only to those with some familiarity with Script. Attendees should also have read the Thesis9 documentation, which is available in In-146.

MVS Batch System Overview: In-119

1410 Monday 20 April Dennis Mar

This talk is a non-detailed introduction to the batch processor and its operating system, MVS. Topics discussed will be the batch processor configuration, resources available, the role of JCL, and MVS/CMS communications. Processing of large data sets and 'number-crunching' jobs are typically performed on MVS at the School.

Microcomputer Networking at NPS: In-151

1900 Monday 20 April Kathryn Strutynski
1900 Tuesday 21 April Kathryn Strutynski

This seminar takes two sessions. It is a hands-on presentation which will introduce you to the software available to users of the AST PC network located in In-151. You will learn to access the software stored on the network server system disk and how to access the physical and virtual disks available on each node. You will also be introduced to printer spooling and use of local printers on the network.

DISSPLA Workshop: In-260

1510 Wednesday 22 April Patricia Collins

This talk will cover some of the special features of DISSPLA, the primary graphics package at the Center. These topics include DISSPOP (for complete device independence), METAFILEs and directive files, enhancement features for various types of graphs and some of the options for creating three-dimensional graphs. Part of the session will be used to answer specific questions from attendees.

Intermediate Topics in VS Fortran: In-119

1510 Thursday 23 April Roger Hilleary

This talk is 90 minutes in length. It is designed to encourage FORTRAN users to familiarize themselves with the features of VS Fortran, the standard Fortran compiler on both the VM and MVS operating systems. VS Fortran includes Fortran 77 as one of its language levels. Added features of Fortran 77 include CHARACTER variables, OPEN and INQ statements, internal READ/WRITE, INCLUDE and PARAMETER statements, an IF-THEN-ELSE structure and much more.

MS-DOS Topics: In-119

1410 Monday 27 April Kathryn Strutynski

This talk is designed to increase your knowledge of the DOS operating system and help you become a more efficient user of your PC. You will learn how to use tree-structured directories to organize your files, how to create batch files to save time and keystrokes, and you will be introduced to the sophisticated commands and command filters of DOS 3.1--ASSIGN, ATTRIB, BACKUP, FIND, MORE, SORT, etc.

Neil Harvey

IBM 327X/MAIN FRAME CONNECTIONS

Requests for 3270 coax connections to the mainframe are handled on a first-come-first-served basis. At present there is no controller space to accommodate new mainframe connections. The Center expects to receive an additional 3174 con-

troller within 90 days. Call Ed Donnellan, x2004, if you want to be placed on the waiting list. If you have previously contacted Mr. Donnellan and were informed you were on the list, it is not necessary to call again.

Ed Donnellan

VM/CMS TOPICS

NEW, SAFER VERSION OF ERASE

TRASH is a new CMS exec which performs the same function as the ERASE command: to delete files from your read/write disks (A-disk, etc.).

Unlike the ERASE command, the TRASH exec warns you if you try to delete certain files. You choose the names of those files and enter them in a file called TRASH WARNING. In addition, you can set options in TRASH WARNING which will prevent TRASH from deleting files unless you take special action.

The TRASH syntax is similar to the ERASE command:

<EXEC> TRASH fname ftype fmode (option

If the name of the file you want to delete matches an entry in TRASH WARNING, you will be questioned again before TRASH completes the action.

If the KEEP option is coded after a file named in TRASH WARNING, TRASH will not delete the file unless you use TRASH with the CAN option.

In place of the filename or filetype, you can code an asterisk "*" or "string*". "*" will match with any filename or filetype. "STRING*" will match with any filename or filetype beginning with "string".

Use XEDIT to create or modify your TRASH WARNING file. Type one name per line; begin the filename in any column; separate filename and filetype by at least one blank.

Sample file:

TRASH WARNING A

```
(1)  MYFILE   FORTRAN
(2)  ORIGINAL DATA     (KEEP
(3)  T*       SCRIPT
(4)  THESIS    *
```

TRASH exec responses:

1) You will be questioned before you can delete MYFILE FORTRAN.
2) The TRASH exec will not delete ORIGINAL DATA from your disk. To do so, you must first delete the above entry from TRASH WARNING, use the CAN option, or use the ERASE command.
3) You will be questioned before you can delete any file with a filename beginning with T and filetype SCRIPT.
4) You will be questioned before you can delete any file with a filename THESIS and any filetype.

For more information about TRASH, type:

TRASH ?

Comments or problems with the TRASH exec should be directed to Dennis Mar, In-102A, x2672.

Dennis Mar

BEWARE GIFT PROFILES

Producers of profiles are urgently requested to carefully consider what commands and PF key assignments they include. PROFILE EXECs which automatically link to all disks that might possibly be needed will significantly affect system

performance for the individual and for the entire user community. In addition, they reduce the usable working space for the individual. PROFILE EXECs which automatically define temporary storage at logon use up a general resource which is in limited supply.

PROFILE XEDITs which provide no Split/Join PFkey greatly hamper the work of the user. Profiles which set a PFkey in Flist or Filelist to logoff are more likely to waste time, by requiring a new logon, than they are to save time.

If you are a new user of the mainframe, consider reading Technical Note VM-02, the tutorial (about 20 pages), and its thoroughly documented PROFILE EXEC, before accepting a complex gift version you don't thoroughly understand. Consider reading Technical Note VM-05, the introduction to the Xedit editor, and its completely documented PROFILE XEDIT, before accepting a complex gift version that may get you into waters.

Several years ago, several privately coded LINKTO EXECs (for linking to another disk or user) got into circulation because there was no system equivalent. Some versions of this exec drop any links they find already in effect. This may cause confusion, and certainly wastes system resources, in that it results in repeated making/dropping of linkages. For a year or more, there has been a simple, effective system LINKTO command that doesn't drop existing links.

You can use the system LINKTO by erasing or renaming the file on your A-disk called LINKTO EXEC (if there is one). You could rename it to MYLINK EXEC if you think you might need it someday, with the command

```
r linkto exec a mylink = =
```

If you have a Profile that you've gotten used to, but it does something you'd like changed, see Larry Frazier, In-104.

Larry Frazier

MVS TOPICS

BATCH USAGE DATA

The following is a summary of usage for selected MVS batch processor programs run in calendar year 1986. Data were extracted from those gathered by the MVS accounting program which records each instance a program is called in a job step and the cpu time used.

Some MVS jobs, such as SAS, are single-step jobs. Others, such as FORTVCLG, are multi-step jobs; it contains three steps. Each time it is called, the count and cpu totals would be increased for FORTVS (VS Fortran compile step), IEWL (linkage editor step), and GO (execution step).

Total Usage

Total usage counts the number of job steps executed and the total time attributed to the steps.

	1986 Steps	1986 CPU Hours	1985 Steps
Total	1,117,431	5,760.0	854,061

Program Execution

The following steps perform the program execution phase of many MVS jobs. The GO step executes the user's compiled code. It is common to programs written in VS Fortran, PL/1, VS COBOL, DSL, Simscript, etc. The linkage editor runs during the LKED step. The IEVMAPP step processes commands for the Versatec plotter. The LOADER functions like the GO step for procedures which do not require the linkage editor.

	1986 Steps	1986 CPU Hours	1985 Steps
IEWL	121,582	38.7	124,503
GO	114,621	3,176.8	117,078
IEVMAPP	19,623	25.8	31,256
LOADER	4,807	113.1	6,323

Language Compilers

Note that much of the PL/1 and VS COBOL use comes from administrative and tenant organizations.

	1986 Steps	1986 CPU Hours	1985 Steps
PL/1	61,454	65.7	47,970
VS Fortran	53,044	32.6	33,033
Fortran H	9,218	3.9	44,569
VS COBOL	2,000	0.7	3,298
Assembler	462	1.6	390
Lattice C	94	0.1	--
Pascal VS	19	0.0	31

Statistical Packages

SAS, SPSSX, and BMDP are the best known general purpose statistical packages. In addition to academic use, SAS is heavily used by the Computer Center's accounting system and by tenant organizations.

	1986 Steps	1986 CPU Hours	1985 Steps
SAS	43,970	775.7	42,057
SPSSX	10,808	16.6	4,429
BMDP	1,893	8.7	1,344

Simulation and Specialty Languages

The cpu time for CSMP (Continuous System Modeling Program) and GPSS (General Purpose Simulation System) includes both program compilation and execution. DSL (Dynamic Simulation Language) and Simscript separate compilation and execution into different steps. Their cpu hours account only for time spent in compilation. REDUCE is a symbolic manipulation language.

	1986 Steps	1986 CPU Hours	1985 Steps
GPSS	2,722	14.7	1,038
CSMP	2,637	35.6	4,220
DSL	252	0.1	1,418
REDUCE	58	0.3	---
Simscript	0	0.0	186

Utility Programs

SYNCSORT is a commercial sorting package. TAPE is a tape handling program from Princeton University.

	1986 Steps	1986 CPU Hours	1985 Steps
SYNCSORT	36,910	93.8	29,466
TAPE	1,996	1.4	2,226

IBM Utility Programs for Data Sets

These IBM utility programs perform various functions such as allocating, copying, erasing, cataloging, archiving, and listing MVS data sets.

	1986 Steps	1986 CPU Hours	1985 Steps
IEFBR14	69,977	0.3	47,208
IEBGENER	51,011	6.5	23,492
IDCAMS	50,164	33.0	40,601
IEHLIST	17,188	2.4	13,531
IEHPROGM	8,787	1.1	4,853
IEBPTPCH	2,345	0.1	2,136
IEBCOPY	1,951	0.9	1,737
IEHMOVE	1,845	1.1	1,993
ADRDSSU	1,768	15.2	1,993
IEBUPDTE	907	0.1	1,292

Dennis Mar

NEW SAS VERSION

As announced in the last issue of the *Bulletin*, the default SAS version on MVS will be switched from release 82.3 to 5.16 at the start of the spring quarter, Sunday 29 March 1987. Beginning that date you will access release 5.16 when you use the standard SAS cataloged procedure:

```
// EXEC SAS
```

Anyone using the test cataloged procedure, SAS516, should switch to SAS.

SAS516 will be removed from the procedure library. Any users of SASV5, the test version of release 5.08, also should switch to the SAS cataloged procedure. SASV5 will also be removed from the procedure library.

Documentation for release 5 is contained in the following publications available from the SAS Institute, Inc. for $19.95 each:

SAS User's Guide: Basics, Version 5 Edition
SAS User's Guide: Statistics, Version 5 Edition

Note that SAS now returns two output listings instead of one. The JCL listing and the SAS log appear in one file. Output from procedures appear in another.

To copy these files to your A-disk, you can use the CMS commands RDR or READJOB. You should not use RECEIVE (PFkey 9 on RDRLIST) because this command removes the print control characters when it moves the file from your virtual reader to the A-disk.

SAS is a registered trademark of SAS Institute, Inc.

Dennis Mar

MISCELLANEOUS

TECH NOTE SUPPLY

The Computer Center publishes technical notes and memoranda to provide essential information to all users. The number of copies we request from the NPS Print Plant is based on average use from our past experience.

On several occasions recently student groups have advised the consultant in In-146 that their intructors have recommended particular Computer Center publications as supplementary texts for their courses.

We want to help the instructional program as much as possible, but in such cases we really need prior notice from faculty members. This ensures that adequate supplies will be on hand, both for class members and all other users of the Center.

Such notice can be given to the User Services Manager, x2752, or to the staff member having responsibility for the particular publication. That information can be obtained by using the CCPUBS exec.

Neil Harvey

OPERATIONS INFORMATION

CONSULTING HOURS

Mon - Fri 0900-1130 and 1315-1545 in In-146

Reference materials in the Consulting Office must not be removed from that room without special permission of the Consultant on duty or a Computer Operations Shift Supervisor.

HOURS OF OPERATION

VM/CMS and MVS are available 24 hours a day, 7 days a week, except during backups from 2130 Saturday until 0800 Sunday. During this time, only MVS is available.

Preventive maintenance is normally performed 0700-1400 hours, first Sunday of each month. Systems work may occasionally be performed between 0700 and 1200 on Saturdays; advance notice will be given in the VM/CMS log message.

Call 646-2713 for recorded system status.

MVS Job Queue Restrictions

No more than 3 MVS (Batch) jobs per individual may be executing and/or waiting execution. This policy allows each individual a fair share of batch processing capacity, and prevents spooling overload problems. It will be enforced by cancelling excess jobs.

Information on Printed Output

The Computer Center has an IBM 3800 non-impact printer and a 1403 impact printer in room In-140. These printers are available around the clock, 7 days a week. (See "HOURS OF OPERATION"). If you want a printer unloaded, expect to wait until an operator is available. If you have received instruction from a computer operator, you can remove printout from either printer. If you do, leave separated output on the counter-top, or file it in the bin matching the first letter of the distribution code. Please observe these rules:

- Press the READY button after removing output.
- Make sure output is folding correctly in the output hopper.
- Separate all jobs in the batch of output removed from the printer.

Avoid unnecessary printing. Return output to your terminal for review and/or editing prior to printing. Use the default output class, SYSOUT = A, for general output from MVS. This produces two output pages per sheet of paper on the 3800 page printer. It is expected that few will need to use the 1403 impact printer.

Budget restrictions and good computing practice dictate that only one final copy of a thesis be produced on any of the Center's printers. If more than one copy is required, use of duplication facilities on campus is recommended. But please note that the NPS printshop will not cut or bind more than one personal copy.

Please put unwanted printout in any trash container in In-140, In-141, or In-151, for recycling.

This publication is published as required and is written by members of the staff, W. R. Church Computer Center (Code 0141), Naval Postgraduate School, Monterey, CA 93943. Send requests for information or suggestions for articles to the User Services Manager, Code 0141 (In-133), x2752 (messages: x2573). Bitnet users may send to Dennis Mar: 2001P@NAVPGS

The Center operates an IBM 3033 Attached Processor System (16 Megabytes) loosely coupled with an IBM 3033 Model U (16 Megabytes) and an IBM 4381 Model M1 (8 Megabytes). Interactive computing is provided under VM/SP CMS, and batch-processing under MVS with JES3 Networking.

Distribution: List 3, plus: 350-B3, 3-B4, 10-F3, 3-F4, 1-F6, 1-F7